

ANNOUNCE PROM ORCHESTRA

CORP XV WILL GO TO PHILADELPHIA ON MID-YEAR TRIP

Will Inspect Campbell Soup
Plant in Camden and
Perhaps du Pont

TOUR ENDS IN NEW YORK

In an attempt to get away from the usual round of New England factory tours, the officers of Corporation XV have mapped out an itinerary for their between-terms plant inspection trip which will take in Philadelphia, New York, and, it is hoped, Wilmington, Delaware.

Leaving Cambridge on Sunday, January 31, the men who take the trip will go to Providence by train. From there they will journey by boat to New York, going on immediately to Philadelphia by train. Plant visits will occupy the whole day of Tuesday in Philadelphia.

Two Technology graduates, now living in Philadelphia, who are very much interested in having Corporation XV make that city the object of their trip, have made every effort to arrange the best possible group of visits there. The Campbell Soup Company's big factory in Camden, just across the Delaware River from Philadelphia, will be the main point of interest. Other factories in the vicinity which will be inspected will include the Budd Auto Body Company and some one of the several rayon manufacturing plants situated there.

It is hoped that on Wednesday, following the tour of Philadelphia, a side trip

(Continued on page three)

Technology Student Publications To Be Received In Turkey

Tech-In-Turkey Representative
Writes To Wallace M.
Ross of T.C.A.

Technology's student publications are welcome even in distant Turkey. In a letter to Wallace M. Ross, general secretary of the T.C.A., Louis S. Morse, Jr., '31, the Tech-in-Turkey representative at Robert College, Istanbul, Turkey, stated that he has not been receiving THE TECH and the other student publications. Preben Oldenburg '33, who is in charge of the Tech-in-Turkey project, sent him a parcel yesterday containing back numbers of THE TECH and "T. E. N." Even a few copies of Voo Doo were included.

In his letter Morse states that "Some of the Professors think that if 'Tech-in-Turkey' does nothing else for the students of Robert College, it shows them a fine example of service and friendship as displayed by the undergraduates of a materialistic college thousands of miles away. It is an example which is needed more than ever in these days of growing barriers that countries are building for so-called 'national protection.' I believe that national protection can come only through the education of the principle that international cooperation and understanding is the safest defence for all nations."

"I have not received any M.I.T. publications, except the Technology Review, which I have privately subscribed for." Arrangements have been made to have copies of all the publications sent to Turkey regularly.

VARSITY QUINTET SWAMPS CLARK IN ONE SIDED GAME

Beavers Cop Third Victory In
Four Starts By 60-30
Win Wednesday

FACE CRIMSON TONIGHT

Winning their third victory in four starts, the Technology varsity basketball team scored almost at will to swamp Clark University of Worcester by a 60-30 score, in a game played Wednesday evening at the Hangar Gym. It was too one-sided a game to be interesting to watch, but it proved an excellent workout for today's battle royal with Harvard.

Clark started off by giving the Engineers a spirited tussle. Brierly, center, made the first basket of the game, and for ten minutes the lead seersawed back and forth. Technology was having trouble getting the passing attack started and Clark took advantage of all their breaks. When the score stood at 10-9 for the visitors, they suddenly seemed to tire. Emond, Sysko, and O'Brien scored in rapid succession and brought the score to 21-10 before another Clark score resulted. After a good many substitutions by each side, the half ended with the scoreboard reading: M. I. T. 25, Clark 14.

Both teams started the regulars again for the second half. The visitors seemed to have profited by the rest, and carried the fight into Beaver territory, neither side being able to score for about two minutes. Then the Engineer attack began to go smoothly for the first time during the evening. Feustel found his eye and three baskets in a row, and Johnson also took a hand in the scoring for the first time. At one time the leaders clicked off fifteen points in a row without a Clark score. In the later minutes, Coach McCarthy gave every substitute in uniform a chance to play, and even the second-stringers held Clark even. The losers managed to sink a few desperate shots to bring the score to 60-30 as the final whistle sounded.

Change Lineup

Early in the game Coach McCarthy made a change in the lineup which worked so well that he kept it intact for most of the contest. When Clark was still leading, he withdrew Coffey, sent Feustel to Coffey's forward post, and inserted Emond at guard. After the change the Beavers began rolling up the score. It is very likely that McCarthy will start these same five men for the Harvard and Brown games.

Feustel Shifted

As was mentioned before, Coach McCarthy will probably start his revised lineup, with Feustel shifted to forward and either Emond or Coffey at guard, in the game with Harvard which will be played at 8 o'clock tonight in the Harvard gymnasium. Harvard, defeated by a strong Columbia quintet in the last game, has not measured up to the usual standard, and on the basis of comparative scores Technology should win by a close score, but this means nothing when two such perennial rivals meet. In the Tech-Harvard games of other years, the favorite very often bowed to a team with superior fighting spirit. The series started in 1921, and in the eleven games played so far Harvard has emerged the victor in nine.

(Continued on page four)

Registration Material Due In Room 3-106 by 1 P.M.

Registration material must be returned to Room 3-106 before 1 o'clock today to avoid a fine of \$5.00. Do not deposit it in the mail box today expecting it to be delivered to Room 3-106 before 1 o'clock. Deliver it directly to Room 3-106.

(Continued on page four)

RANNY WEEKS AND POPULAR RADIO BAND TO PLAY FOR LEADING INSTITUTE AFFAIR

Decision to Abandon Open House Day This Year Is Made Known

Better Appreciation of Affair
Believed Possible If
Held Less Often

Bursar Horace S. Ford, speaking for the Administration, announced last evening that Open House Day had been cancelled this year. Although the present depression is said to have figured in the decision, the main cause for discontinuing the event, according to Mr. Ford, is the prevalent feeling among those in charge that the affair would be far better appreciated and would draw a more cosmopolitan group of spectators, if it were held less frequently, that is, about once in two years.

Norman O. Paquette '32, president of the Combined Professional Societies, the group which last year managed the affair and who had offered to do the same this year, announced last evening that plans for a proposed student Open House Day were very indefinite and that it was decidedly doubtful whether the Professional Societies would extend their activities in that direction this year.

The abandonment of Open House was expected by many of the students and faculty, so that the announcement does not come as a surprise.

"PROM GIRL'S" NAME TO BE SECRET TILL EVENT TAKES PLACE

Committee Hints That She Will
Be Prominent Musical
Comedy Star

FAVORS ARE SELECTED

Ranny Weeks' National Broadcasting Company orchestra has been selected as the first of two orchestras to play at the Junior Prom. Arrangements for the other orchestra will be announced in a future issue of THE TECH. At present this aggregation is one of the Lucky Strike orchestras, and also plays with the Fox Fur Trappers.

According to Walter Winchell, this is the best orchestra ever to play on the Lucky Strike Hour. It is very popular in the West and is becoming so in the East, having played in the new Waldorf-Astoria Hotel. Several years ago, Ranny Weeks, who hails from Everett, sang for Leo Reisman.

Signups For Prom Urged

To facilitate table arrangements, it is urged that all those who desire to attend make their signups between February 10

(Continued on page four)

Twelve Thousand Locks with Forty Thousand Keys Guard Technology

Twelve Officials Can Open Any Door in Buildings with Grand Master Key

Down in the cabinets in the office of the Superintendent of Buildings and Power, there are about thirty-six thousand keys, with about five thousand more in the locksmith's safe. These fit more than twelve thousand locks in and around the Institute. But any one of those twelve thousand may be opened by one of only ten master keys. This clever bit of lock design, together with an index system enabling any one of the keys to be located almost instantly, have given Technology a lock system which is the envy of most of the other colleges in the country.

Each of the three thousand odd Institute doors is guarded by a two-plug Yale cylinder lock which may be opened by any one of four different types of keys. The individual keys, which are issued to instructors and others who are entitled to them, are controlled by the heads of the teaching departments, and are issued from the Superintendent's office only on a written order from that head, fit the lower plug of the lock and open only one room or suite of rooms.

The departmental master keys are also controlled by the department heads, and are usually issued to Senior professors. These keys will open any door in a teaching department and fit the upper plug of the lock.

Staff Supplied With Master Keys

Members of the building service staff and the building janitors are supplied with building master keys, which also fit the upper plug of the lock and will open any door in one particular building. These keys are checked very carefully and are ever allowed to be taken out of the buildings overnight. The men receive their keys when they start work in the morning, and leave them at the superintendent's office when they check out at night.

Only thirteen grand master keys have

been issued. These keys, which are distinguished from the others by having the handle end rectangular instead of round, will open any door in the Institute. Three of them are in the possession of members of the engineer force of the buildings, while President Compton, Dean Lobbell, Bursar Ford, and certain other administrative officials hold the others.

All keys are stamped with a special code number, which, however, has no relation to the number of the room or locker whose lock the key fits. Individual keys are also stamped "M.I.T." to facilitate their return if they are lost, but none of the master keys are connected with the Institute in that manner. If a key is lost, the owner must secure another from the superintendent's office, and the Institute locksmith makes up a duplicate to replace the lost key.

Exclusive Type

It should be impossible for anybody to have a copy of any key made outside of Technology, for all the Technology keys are made on one form of blank which, according to the terms of the Institute's contract with the Yale and Towne Company, is never to be sold to anyone but the Institute. However, this is not quite true because key designs cannot be patented or copyrighted, and there are many "mongrel" blanks on the market which are copies of the original Yale blanks. Keys made from these blanks are refused when returned to the office, and the deposit will not be paid on them.

At the present time, the Institute is using about three thousand door locks, all different, and even taking into account the rapid expansion of the facilities, there seems little danger that any key will open any lock that it is not intended to open. Each key has six points on its top edge, each of which may be any one of nine different heights. In addition, there are about thirty possible forms of keyway, which gives a total of around one hundred thousand different combinations.

(Continued on page four)

Electrical Progress of Past Year Reviewed in Westinghouse Bulletin

Achievements Include Railroad Electrification, Power Installations

Outstanding achievements have been made in the electrical field during the past year, especially in the increasing of the country's power supply, according to a bulletin just issued by the Westinghouse Electric and Manufacturing Company. The bulletin records advances in protection of electrical equipment against lightning.

In the field of transportation, the most important step has been the preparation of the \$9,000,000 electrical equipment which is now being installed on the Pennsylvania Railroad between New York and Philadelphia. Passenger locomotives will be enabled to draw heavy trains at the rate of ninety miles an hour.

Design Akron's Equipment

Many interesting problems were encountered in the building of the electrical apparatus for the Navy's Akron, according to the statement. All pieces in switchboard, 'phones, radios and cables had to conform to a strict standard of minimum weight, retaining at the same time a maximum of ruggedness.

In naval work, the largest order was for the turbo-generator equipment for the new liner President Coolidge. Two 13,250 h.p. synchronous motors are the principal elements of this ship's equipment.

Electricity Used As Industrial Aid

Much new electrical equipment has been created to meet the needs of many diversified industries. Steel mills, oil drilling works and paper mills are representative of the widespread users who had special equipment fitted to their needs.

Of interest in the field of power generating installations are the new developments of Osage, Safe Harbor, Chute a

Charon and Diablo. The Osage development is unusual because of the fact that a new lake more than one hundred miles long was created to furnish power to St. Louis, 138 miles away.

Construct High-Speed Generators

Westinghouse built the largest turbo-generator ever constructed for a speed of 3,600 revolutions per minute. The tips of the blades travel at a speed of thirteen and one-half miles per minute.

Transformer design has been improved so that a surge of 2,520,000 volts of electricity rising at the rate of 11,000,000 volts per millionth of a second failed to do any damage when thrown on the transformer.

Switchboards Improved

Operation of equipment in 24 distant substations is controlled from a new type of supervisory board, and the largest metal-clad oil-filled switchgear ever shipped out in completely assembled sections was built.

New Method on Elevators

Above a certain altitude in skyscrapers the weight of buildings caused the guides in elevator shafts to buckle, destroying the smoothness of perpendicular travel. Westinghouse engineers created a new method of attaching the slides, smoothing out the travel of the elevators. Emergency devices have made it possible to speed the elevators up to about 1,200 feet per minute, or 13 miles an hour.

New Short Wave Tested

Experimental work with the ultra short 42-centimeter radio beam revealed a new power for such short waves and it is believed that the studies will have an important bearing on the commercial development of television.

A Record
of Continuous
News Service for
Over Fifty Years



Official News
Organ of the
Undergraduates
of M. I. T.

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Walker Memorial, Cambridge, Mass.
News and Editorial — Room 3, Walker
Telephone, University 7029
Business — Room 302, Walker
Telephone, University 7415
Printers' Telephone, University 5650

SUBSCRIPTION PRICE \$2.50 per Year
Published every Monday, Wednesday and
Friday during the College year, except
during College vacations

Entered as Second Class Matter at the
Boston Post Office
Member Eastern Intercollegiate
Newspaper Association

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STILL WATERS

PLANS and programs are difficult of compilation when we are dealing with movements of great bulk. However, two of the year's potentially great functions are rapidly being formulated under the quiet management of able leaders. The Junior Prom Committee, headed by Robert G. MacKay, President of the Class of 1933, has, previously to today, made no official announcements of its progress; in fact, it had revealed very few of its plans. Yet that committee has completed a considerable portion of its work, as today's announcements indicate, and needs but time for the full completion of its duties. We would add our words of praise for the committee to those of the majority of interested students for its choice of two orchestras, and for the fact that it has seen fit to render to the Junior Prom all the enhancing qualities it deserves.

The agitation for another Tech Circus brought this year a new peak in student enthusiasm, so great an enthusiasm that there will be such a function in April. Not in contradistinction to the Junior Promenade, this is an affair involving a tremendous amount of preparation, and an especially great amount this year since the last Circus was several years ago. Under Francis S. Chambers, Jr. '32, however, activity has not been lacking, and the committee in charge has already disposed of many matters.

We have these to look forward to next term, the Prom and the Circus, even though we still do not know their complete identification and probably will not until the respective committees feel that they have completed sufficient of their plans to warrant official announcements of program. Much more actual progress has been made than may be generally believed, and we may anticipate two very successful functions, managed by competent and conscientious leaders.

MECHANICAL EDUCATION

NO matter what the state of affairs, there are always those who think that everything is not as it should be and that a change would be beneficial. Many times those who complain of conditions are but chronic complainers, but those who would have altered methods and who have presented definite plans for doing so are listed among the progressives who are in a large measure responsible for the progress that has been made in the world.

The educational system now used in the United States, involving as it does a great number of courses given through the traditional lecture-recitation method, has borne the brunt of much criticism. Repeatedly the American educational system has been discussed, and many times the discussions have led to the conclusion that some change is necessary. One of the latest to offer criticism is Dr. William S. Learned of the Carnegie Foundation for the Advancement of Teaching, who spoke in the eighth Inglis lecture at Harvard Wednesday evening.

Indicting American education as a mechanical apparatus for turning out a mechanical product through a complex system of term grades, semester hours, dean's lists and what-not, Dr. Learned said that he awaits the college that will give students a freedom from requirements and an opportunity to discuss their work with the Faculty.

While a new system that would give the students the mentioned freedom might be practical at Liberal Arts colleges, it appears that the practice of requiring certain work for graduation cannot be abolished at technical schools. The curricula that have been established are the direct result of experience. Practising engineers have found certain knowledge necessary in their work, and it is these subjects that are covered in the engineering courses.

There are ways in which engineering courses can be improved, but the idea of entirely removing the mechanical, standard method of group instruction of engineering subjects seems to be of doubtful value. Instead of proposing such a course for technical schools, would it not be better to concentrate on the idea of giving more personal instruction to students, of having smaller classes so that discussion would be prompted, of placing the student more on his own after the courses he is to take have been chosen and instruction begun?

OPEN FORUM

Emancipation Club

To the Editor of THE TECH:
A great deal of comment has been made on the M. S. petition circulated during the last week.

Due to the short time before the exams, we (the Emancipation Club) were unable to circulate this petition over a long period of time. During the week the petition circulated, sixty-five per cents of all students who were requested signed the petition.

In explanation of our policy, it might be said that it is our belief that the first two years of undergraduate R.O.T.C. is very inefficient and ineffective. In suggesting International Law and Economic History of the United States, the Club wished to secure courses which would present an international outlook.

To clear up a prevailing opinion, the Emancipation Club wishes to state that we have no connections with any other groups or organizations. It is a spontaneous uprising against expensive propagandizing. It is our desire and aim to do away with Compulsory R.O.T.C. at Technology and to substitute in its place courses which are of interest and practical value.

Sincerely,
E. L. HALL '32
Chairman of Emancipation Club.

"De-bunking" Longfellow

"Under the spreading chestnut tree
The village smithy sits;
For he's been eating chestnuts
And they were full of worms."
— Medical College of Va. Skull and Bones.

As We Like It

Colonial Theatre

MARINA

The question is whether to comment on "Marina," now playing at the Colonial Theater, as if it is an amateur production giving local performers aspiring to the Broadway stage and a few others a chance to show their talents. or as if it is a production directed and acted entirely by those who are supposed to know how. As the latter type of show, one would have to be cruel; it lacks the sophistication, the coordination, the good taste in color and design of costumes that makes a New York show. Unfortunately they have ambitions to take the production to New York.

As a semi-amateur theatrical stunt it seems to succeed fairly well. There are two or three good singers, two bearable dancers, and rather good direction for such a company. An operetta should be colorful and have plenty of music. This show has all of that, even though it did have some unpleasant shades of green and orange.

To try to laud this play in the manner of most Boston papers is a matter of patriotism to Boston and its local productions. Only patriots will enjoy this show to its fullest extent. D. H.

Two Single Rooms

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AMUSEMENTS

STAGE

Copley
"This Thing Called Love." Closing this week. Beginning next Monday, "In the Next Room."

Hollis
"Cloudy With Showers," comedy with Thomas Mitchell. Will close at the end of next week.

Colonial
"Marina." Reviewed in this issue, closing at the end of this week. To be followed by "The Band Wagon," with Fred and Adele Astaire, Frank Morgan and Helen Broderick. The production comes here direct from New York.

Shubert
"The Good Companions." Reviewed in Wednesday's issue.

Majestic
"Blossom Time," the old favorite, with the ageless melodies of Shubert.

Wilbur
Cornelia Otis Skinner in six special performances of "The Wives of Henry VIII." Playing on the evenings of January 17, 19, 20 and 21. Matinees on the 18th and 20th of January.

Fine Arts
"Delphine," beginning Monday. A musical comedy, with French dialogue and singing. Starring are Alice Cocca and Henri Garat.

SCREEN

Loew's State
"Hell Divers," opening tonight with Wallace Beery, Clark Gable, Conrad Nagel, Dorothy Jordan, Marjorie Rameau and Marie Prevost. Made with assistance from Navy flyers and directed by George Hill. This should be an interesting spectacle.

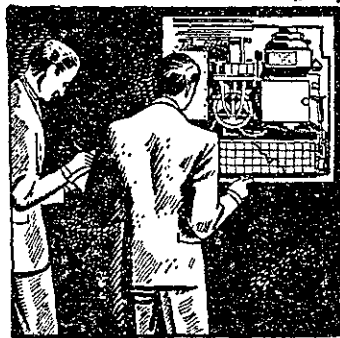
R.K.O.-Keith's
"Forbidden," with Barbara Stanwyck and Adolphe Menjou, starting tonight. We hope Menjou is as good as he was in "The Front Page." Keith-Boston
"Unexpected Father," with Slim Summerville. Also vaudeville.

DUKE UNIVERSITY

SCHOOL OF MEDICINE

Durham, N. C.

Applications for admission to the first and third year medical classes entering October 1, 1932, should be sent as soon as possible, and will be considered in the order of receipt. The entrance qualifications are intelligence, character, two years of college work and the requirements for grade A medical schools. Catalogue and application forms may be obtained from the Dean.



But the telephone conversation must not freeze

A sudden cold snap might seriously interfere with long distance telephone service were it not for the studies made by Bell System engineers.

They found that temperature variations within 24 hours may make a ten-thousandfold difference in the amount of electrical energy transmitted over a New York-Chicago cable circuit! On such long circuits initial energy

is normally maintained by repeaters or amplifiers, installed at regular intervals. So the engineers devised a regulator—operated by weather conditions—which automatically controls these repeaters, keeping current always at exactly the right strength for proper voice transmission.

This example is typical of the interesting problems that go to make up telephone work.

BELL SYSTEM



A NATION-WIDE SYSTEM OF INTER-CONNECTING TELEPHONES

AIRSHIPS WILL BE
POPULAR SCIENCE
LECTURE SUBJECT

Dr. Smith Will Discuss History
Advances in Design and
Describe "Akron"

SHOW MOTION PICTURES

"Airships — America Steps Ahead With the Akron," will be the subject of the second Society of Arts Popular Science Lecture to be delivered at Technology by Dr. Richard H. Smith, professor of Aeronautical Engineering, on next Sunday afternoon at 4 o'clock.

Dr. Smith will first discuss the history of airship development, significant advances in design, contrasts with the airplane, and its achievements in transportation. He will then describe the Akron, the world's largest airship, the reasons for building her, the size, speed, and carrying capacity of this great ship, her usefulness as a commercial air liner, improvement in design, her safety as compared to an ocean liner, and the value of helium gas, with which this ship is filled.

The lecture will conclude with a discussion of the future of airships, proposed transoceanic airlines, and their possibilities for commercial success. Professor Smith will illustrate his talk with striking slides and motion pictures depicting phases of the Akron's construction and other recent aeronautical developments.

Dr. Smith is widely recognized as an authority on aeronautical engineering. He is a graduate of Technology in the Class of 1918, and received the degrees of Master of Arts and Doctor of Philosophy from Johns Hopkins University.

CRIPPLED BEAVERS
TO FACE WILLIAMS

Three Men Unable to Make Trip
For Tomorrow's Game At
Opponent's Rink

In the last game before the mid-year examinations the varsity hockey team travels to Williamstown to play Williams' sextet tomorrow night. Not much is known of the Williams team but it is felt that the Engineers should chalk up a win. The game will be played on an outdoor rink.

Dick Cochrane, center on the first line, Johnny Hrones, and Ranny Thompson, center and right wing of the second line, respectively, will not be able to make the trip because of exams. Cochrane and Hrones are two of the best men on the team and their absence will prove a handicap for the Beavers. Walter Silverman, left wing on the second line, will probably be used in combination with Captain Tommy Regan, and Joe Fahey, to compose the first line.

At the Arena last Tuesday morning the varsity and the freshmen practised together. At the end of the session there was a short scrimmage between the two. The varsity scored several times on their younger rivals but did not show as well against them as it should have. Perhaps the absence of Captain Regan, and Otto Peterson, was the cause. Mathias, left defense man, looked good for the freshmen, and will make a very good candidate for the varsity next year.

Professor Foils Trick
Of Freshman Section

In a futile attempt to convince Professor Rutledge that they had some brains, the master minds of a freshman section put their heads together, after which all the chalk in the room was emptied into a chalk box, and secreted far in the rear of the room. Next, a cigarette appeared. This was daubed fore and aft with some white chalk dust, and made to appear like a piece of it. Then, strategically, it was placed directly behind Professor Rutledge's seat.

Within a few seconds of the bell, the Professor himself hustled into the room. After the usual preliminaries, he set about to expound some staid old calculus. At last he stood up, talking, to make one of the precise illustrations for which he is famous, and glanced along the chalk tray for a piece of chalk. His eyes fell upon the camouflaged snipe, dwelt there for a fraction of a second, but looked on for another piece, making no sign that he had seen the trick. The chalk box was promptly hunted up, and the lesson went on.

Boxing Team Leaves
Tonight on Trip to
Meet Army Varsity

Best Team in Years Expected
To Show Generals Some
Fast Fighting

Taking its first trip of the season, the varsity boxing team will meet Army varsity at the Military Academy at West Point. The meet will be staged Saturday, January 16, and the team will entrain this evening for New York State.

At West Point all the weights will appear in the events with the exception of that of the heavyweight class; and to meet the heavyweight of the Army team, Collins of the Institute freshman aggregation will stage an exhibition match with an Army heavy.

Of the thirty men out for boxing about fifteen are on the varsity team. Captain Cooper was runner-up for the Intercollegiate Championship of last year, fighting in the 165-pound class. Following is the lineup for the Army game: 165-pound class, Cooper (Capt.); 155-pound class, Malmstrom; 145-pound class, Carey; 135-pound class, Wetherill; 125-pound class, Bradford; 115-pound class, Stacinski.

COURSE XV PLANS
INSPECTION TOUR

(Continued from page one)

may be made to Wilmington, where the largest group of the diversified Du Pont plants are located. This trip has not been definitely scheduled as yet, since word has not been received from the Du Pont Company. Should it become necessary to omit this trip from the itinerary, the time will be adequately filled in with other visits of the same caliber in Philadelphia and New York.

To See Stock Exchange

On Thursday the group will return to New York to spend a day. Visits there are being arranged to include a short inspection of the New York Stock Exchange, Lord and Taylor, one of the largest of the retail department stores in New York, and, finally, the advertising agency of J. Walter Thompson, Inc.

With the conclusion of the day in New York, the trip will officially close, leaving the rest of the time before the opening of the second term for the members of the group to amuse themselves, according to their own desires.

May Join Trip Any Time

Officers of Corporation XV wish to emphasize particularly the fact that men who may wish to see only certain plants amongst those to be visited are entirely free to do so. Anyone, whether a member of the Society or not, may join the party at any point and may leave whenever they feel that they have seen all they care to.

Expenses for the entire five days, not including meals, which the men would have to pay for anyway, have been tentatively estimated at twenty dollars for all transportation and hotel charges. This sum has not been estimated to include the cost of returning from New York, since the men are entirely free to elect their own methods for getting back to Boston.

Professor Eddy Will Go

Professor Robert C. Eddy, an associate professor in the department of Business and Engineering Administration, has definitely stated that he will accompany the students on the trip. Other members of the instructing staff in Course XV may also join the group.

Men who wish to signify their intention of taking the trip should see Charles W. Isselhardt '32, president of Corporation XV. Isselhardt may be found in the Dormitories. Those who desire further information concerning the plans or possible changes in the plans should also see Isselhardt.

HERE AGAIN!

The
SNOW
TRAIN
With it come the pleasures of skiing, skating, snowshoeing and tobogganing deep in the mountainous regions of picturesque New Hampshire where Winter Sports conditions are best.
Make up a party of your friends or come alone on the next trip. You'll have "the time of your life."
Snow Train announcements appear on page 1 of Boston papers Fridays.
For particulars phone
CAPITOL 6000
Extension 488

BOSTON AND MAINE R. R.

Thursday Last Day for
Freshman Substitutions

Next Thursday will be the last day on which freshmen will be allowed to substitute a sport for P. T. 2. Those who have not made substitutions at that time will be required to take Physical Training during the first ten weeks of the second term. Freshmen desiring to take up a sport should see Coach McCarthy at his office any morning between 9 and 12 o'clock.

RICHARDS MEDAL
IN CHEMISTRY GOES
TO A. A. NOYES '86

First Recipient of Award Was
A Former President
Of Institute

AUTHOR OF MANY BOOKS

Professor Arthur A. Noyes '86, now director of the Gates Chemical Laboratory of the California Institute of Technology, Pasadena, California, has been awarded the Richards Gold Medal for conspicuous achievement in chemistry by the Northeastern Section of the American Chemical Society, according to an announcement just made by Professor William P. Ryan, chairman of the Section. The medal will be presented at the time of the annual meeting early next May.

The Richards Medal was established by the Northeastern Section in 1929 to commemorate the many fundamental contributions made to chemistry by the late Theodore William Richards, who was professor of Chemistry in Harvard University for over twenty-five years and the only American chemist to receive the Nobel prize. He was a member of the Northeastern Section for thirty years. A trust fund of \$10,000 to endow the medal has been raised by a committee consisting of Lyman C. Newell, Arthur D. Little '85, and James F. Norris. The medal was designed by Cyrus E. Dallin who was an intimate friend of Professor Richards.

Graduated in 1886

Arthur Amos Noyes, the first recipient of the Richards Medal, was born at Newburyport, Mass., in 1866. After graduation from the Massachusetts Institute of Technology he studied in Leipzig, where he received the degree of Ph.D. in 1890. He taught at the Institute from 1890 to 1919, and was acting president 1907-1909. He went to the California Institute of Technology in 1915 to assist in its organization and took up permanent residence there as professor of Chemistry in 1919. In recognition of his contributions to Chemistry he has been elected to numerous scientific societies, has received many honorary degrees and has been awarded several medals, including the Davy medal of the Royal Society of London.

He is the author of books in qualitative analysis, organic chemistry, and physical chemistry, and has published a large number of articles on his original researches in theoretical, analytical, and organic chemistry in American and foreign journals. As a chemist he stands in the front rank of American chemists and has an international reputation, especially in the fields of qualitative analysis and physical chemistry. Professor Noyes was a charter member of the Northeastern Section of the American Chemical Society and is well known in Boston, which is the headquarters of this Section.

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BEAVER BRAWN

Technology did come through magnificently against the Clark ball team on the hardwood floor in the basketball game, Wednesday night. Against such competition, the two Beaver forwards O'Brien and Feustel looked plenty smooth. O'Brien was tossing them in from all corners of the court, even pitching them back over his head to lead all scorers for the evening. The work of Captain O'Toole, the Clark right forward, was the only redeeming feature of the work of that team.

Harvard expected less than usual from the Technology swimmers, for one of the Harvard coaches offered odds that the natators would not take a first place. Too bad that nobody took him up, for Lykes outdid himself to show some fine diving, and won first in that event with ease. Tomorrow they have a little more than they can handle in a meet with Brown. Bill Lewis, the Brown star dash man, holds intercollegiate records in the 50-yard dash. Stanton and White should take one-two honors in the backstroke for the Providence school. Their relay team is also very fast. In the other events the Beaver players should have much more chance to put up competition.

Mr. H. P. McCarthy, the overlord and mentor of the Institute basketball team, has stated for all ears that the game with Harvard will be a good one, and that Technology has a better chance than usual to take over the Crimson hoopsters. Teamwork has been developed to a high degree on the Beaver squad, which may be a big factor in tonight's game. As far as the Brown game tomorrow night, that should be a bit less of a workout, for the Brown team has had difficulty this season. The only team they have beaten is Northeastern, and there only by one point. The Engineers should win.

Last night was a different matter as to the Dorm basketball championship with Wood winning by only one point, 16-15. The teamwork and passing on the Wood team seemed to be better than that of their rivals, but many of the shots just wouldn't go in. More power to both of them in the final game next Tuesday.

F. K.

Students must shed vests in the sanctum of the Columbia University library. The student must either retain their jackets or divest themselves of both coat and jacket. The idea is that a "vestless" or a "jacketed" student body makes a more favorable appearance.

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C·A·L·E·N·D·A·R

Friday, January 15

8.00 p.m.-2.00 a.m. — Senior Class Prom in Main Hall of Walker Memorial.

Saturday, January 16

1.00 p.m. — Tech Women's Association luncheon in North Hall of Walker Memorial.
 8.00 p.m. — Basketball game with Brown University in Hangar Gym.
 9.15 p.m.-12 p.m. — Beaver Key Society dance in Main Hall of Walker Memorial.

Sunday, January 17

5.00 p.m. — Address by President Compton at the Westminster Presbyterian Student House.

Monday, January 18

5.00 p.m. — Banjo Club rehearsal in East Lounge of Walker Memorial.

SWIMMERS LOSE HARD MATCH TO HARVARD SQUAD

Lykes Takes Only First Place
For Beavers; Henning and
Flanders Also Star

FINAL SCORE 56 TO 15

Technology mermen bowed to Harvard on Wednesday night in both the varsity and freshman meets. The score for the varsity tilt in the evening was Harvard 56, M. I. T. 15, and for the freshmen Harvard 44, Technology 8. Both meets were held at the new Harvard pool, which is now in use.

Taking the only first place for the Institute varsity was Lykes, who did some beautiful diving, and outclassed not only his Harvard rivals, but his own teammate, Brandi, who was listed as a possible scorer in the event. In the 50-yard free style race, Heintz, of the Institute team, took third place, after fighting the whole race out with two men who had an edge on him.

Henning Takes Second in 220

Sticking to the feet of the Harvard man the whole distance, Henning managed to take second place in the 220-yard free style race, with Devereux leading, and another Harvard man, Winsor, following. The time for this race was 2:34 3-5s.

Flanders, the new Technology breast stroke record holder, took the only other second place, when he followed Larcom of Harvard to the finish. Larcom made a new Harvard record for the event, cutting the time down to 2:44 1-5, which is two and four-fifths seconds less than the previous mark. The Institute team was without the services of Capt. Jim Turner in the event. A third place in the 440-yard free style, taken by Vaughan, another in the 150-yard back stroke, contributed by May, and another in the 100-yard free style, made by Heintz, completed the scoring for the Institute with the exception of the second place in the relay.

Outstanding for their performances on the Technology squad were Lykes, Henning and Flanders. When a man takes firsts consistently, as does Lykes, and is not stopped by such a strong team as Harvard, he is decidedly a swimmer of the first class. Likewise for Henning and Flanders, both of whom put up amazing style and spirit in their races, in spite of the manifest superiority of the Harvard men.

DuRoss and Paige Stand Out

Among the freshmen, DuRoss and Paige were without doubt the outstanding performers, each taking a second place. DuRoss, against a stronger man from Harvard in the 50-yard free style, fought all the way, and held off a persistent Crimsonite until he had crossed the finish line, with a clear title on second place. In the diving, Paige simply lacked the finish, and apparently the experience which gave the win to his rival. With the supervision that Coach Untersee is able to give, both of these boys should develop into first-class swimmers.

Thirds were taken in all the other events by men on the Institute yearling team, but things looked up again when they came through for a win in the relay. Harvard had, taken first places in all the other events, so the coach used as many new men as possible in the relay, with the result that he lost the race by rather a wide margin.

Tomorrow afternoon, the varsity and freshman teams will go down to Providence to meet the two Brown teams. The Bruins have a reputedly strong outfit, and should hold their end up well, whatever the competition may show. Their best men include Bill Lewis, who holds some

Thousands of Door And Locker Keys in Eighty Drawer Case

Whereabouts of Every Key Is
Known by Coded
Card Index

(Continued from page one)

Besides the door locks, there are about five thousand lockers in the boat house, the track house, the Walker Gym, and in the several locker rooms in the main group of buildings. All these lockers are atted with eight lever locks using flat keys, find all the lockers can be opened with one of four master keys. Lockers are rented for specified periods of time, and the keys are supposed to be returned when the lease on the locker runs out.

However, sometimes through carelessness, sometimes through the hope of being able to use the locker for another year without paying the rental, the keys are not returned. In this case, in order to prevent the illegal use of the locker, the lock is sealed with a special plug which fits into the back of the key opening. This prevents the lock being opened by the regular key, but does not obstruct the use of a special master key designed for the purpose by the Institute locksmith. If the key has not been turned in by the start of the next term, the lock itself is changed.

The locks on the drafting room tables are similar to those on the lockers except that they have only five levers. There are about four thousand of them, with five master keys.

Three Keys for Each Lock

There are at least three of the individual keys for each of the twelve thousand odd locks. These keys are kept in a set of eighty drawers in the superintendent's office, each drawer having spaces for one hundred and fifty sets of three keys. These drawers, which are set in vertical rows of nine, are locked every night to prevent loss of any of the keys, by means of long bars extending up the edge of the cabinet and fastened with padlocks. In addition to these, a set of sample keys numbering almost five thousand is kept in the locksmith's safe, to use to make up duplicate keys if all three of the others are out. All of the master keys are also kept in the safe.

All Key Records Kept

When a key is issued, two cards are made out besides the deposit card. One of these is filed under the code number of the key issued and bears the name of the person to whom the key was issued. Inasmuch as all the cards for keys of the same number come together in the file, it is easy to see at a glance just how many keys to a lock are out and who has them. The other card is filed under the name of the person to whom the card was issued, and carries the numbers of all the keys which have been passed out to him. This sort of cross reference system permits an accurate check on the whereabouts of every one of the thirty-six thousand keys.

Price of Tech Songbook Cut To Close Out Issue

Those of us with Scotch instincts may be interested to know that the price of the Technology Song Book has reached a new low. In order to close out the last of the issue, they are being sold at half price, 50 cents. There are only a few left, so that anybody who wants to take advantage of the depression price should get his copy at the Information office, Room 10-100, as soon as possible.

BEAVER KEY DANCE AFTER BROWN GAME

Beaver Key will hold another of its popular dances after the basketball game with Brown, tomorrow night. Immediately following the game, which will be played in the Hangar Gym, the dance will be held in the Main Hall of Walker Memorial from 9 to 12 o'clock.

Music for the dancing will be furnished by the Techonians. To attract as many as possible, tickets are selling for only 75 cents per couple, the same for stags. They may be obtained at the door on the night of the dance. Asst.-Dean and Mrs. Thomas P. Pitre will be chaperones for the affair. More than two hundred attended the last dance given by Beaver Key after the game with Newport.

BEAVERS COP THIRD WIN AGAINST CLARK

(Continued from page one)

the Engineers registering their triumphs in 1922 and 1929. It is interesting to note that none of the games was won by more than eleven points, showing how hotly contested these tussles are.

Harvard Starts With Newcomer

Coach Ed Wachter is most likely to start the game with two newcomers, Baskerville and Matursevitich at forwards, Captain Pattison at center, and the veterans Hageman and Huppuch at guards. Should Matursevitich be unable to play, Pattison will assume a forward berth to make room for Rauh at center.

Saturday night in the Hangar Gym, the freshmen and varsity teams of Brown and the Institute will play, with the yearlings scheduled to start at 7 o'clock.

The score of Wednesday's Clark victory:

| M. I. T. | G | F | P | Clark | G | F | P |
|-----------------|----|----|----|----------------|----|---|----|
| O'Brien, lf | 7 | 0 | 20 | W. French, lf | 0 | 0 | 2 |
| Orr | 1 | 0 | 2 | Vingueterra | 1 | 0 | 2 |
| Coffey, rf | 0 | 1 | 1 | Janus | 0 | 0 | 0 |
| Oldham | 1 | 0 | 2 | O'Toole, rf | 7 | 1 | 15 |
| Johnson, c | 2 | 1 | 5 | Gallagher | 1 | 1 | 3 |
| Steele | 0 | 0 | 0 | Brierly, c, rg | 1 | 0 | 2 |
| Struck | 0 | 0 | 0 | Dworn | 0 | 0 | 0 |
| Con | 1 | 0 | 2 | Dornedjian, lg | 2 | 1 | 5 |
| Feustel, lg, rf | 8 | 1 | 17 | Wick | 1 | 0 | 2 |
| Emond | 2 | 1 | 5 | M. French, rg | 0 | 1 | 1 |
| Wehmiller | 0 | 0 | 0 | Horowitz | 0 | 0 | 0 |
| Sysko, rg | 3 | 0 | 6 | Graham | 0 | 0 | 0 |
| Agenta | 0 | 0 | 0 | | | | |
| Schneek | 0 | 0 | 0 | | | | |
| Totals | 25 | 10 | 60 | Totals | 13 | 4 | 30 |

Referees: Kelleher and Featherstone.

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PICK FIRST OF TWO PROM ORCHESTRAS

(Continued from page one)

and 13. The signups will cost \$3.50. A special feature concerning them will be announced later. Redemptions, which will cost \$8.50, will be made between February 29 and March 2.

Favors for the Prom have been selected, but no amount of persuasion has succeeded in getting the committee to tell what they will be. It is promised, however, that they will be the best that have been seen in a number of years.

Who Is Prom Girl?

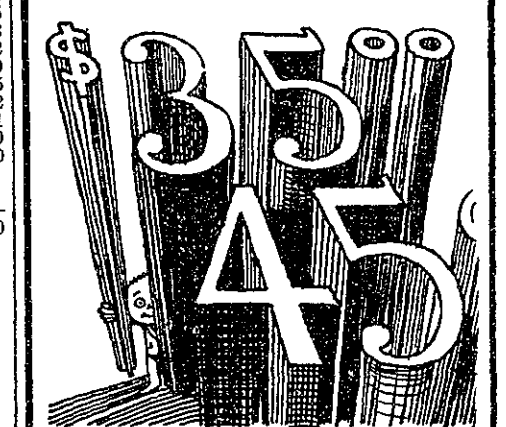
Mystery shrouds the plans of the Junior Prom Committee, for they have only divulged the fact that a "Prom Girl" will be one of the guests at the Junior Prom in March. Although her name will be kept secret until the night of the dance, when she will be presented, the committee has hinted that she will come from one of the musical comedies on the New York or Boston stage.

As a precedent for this action there is the Junior Prom of 1929 and that of 1930. In 1929 the committee announced a "Prom Girl," her name being kept secret until her presentation, when she proved to be none other than Polly Walker, the star of "Billie." She came as a guest of one of the members of the Committee, who saw very little of her during the dance, for she became the center of attraction the moment she arrived. In 1930 the "Prom Girl" was Carolyn Humphries, star of "Last Hour."

ANNUAL MEETING OF WOMEN'S ASSOCIATION

The annual meeting of the M.I.T. Women's Association will be held tomorrow at 11.45 o'clock in the Emma Rogers Room. Following the meeting, there will be held a luncheon at 1 o'clock in the North Hall of Walker Memorial. The speakers will be President Karl T. Compton and Professor Frederick K. Morris of the Geology Department.

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